Collider-Accelerator Department

FY 2001 Self-Assessment Report

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I. Collider-Accelerator Department (C-AD) Mission

In support of Brookhaven National Laboratory's broad mission of providing excellent science and advanced technology in a safe, environmentally responsible manner the Collider Accelerator Department is committed to the following:

- ❖ Excellence in environmental responsibility and safety in all C-A department operations.
- ❖ Develop, improve and operate the suite of proton/heavy ion accelerators used to carry out the program of accelerator-based experiments at BNL.
- ❖ Support the experimental program including design, construction and operation of the beam transports to the experiments and partial support of detector and research needs of the experiments.
- ❖ Design and construct new accelerator facilities in support of the BNL and National Missions.

II. Self-Assessment Program

The objective of the C-AD self-assessment program is to provide a systematic approach to performance management. That is, to provide C-A management with information needed to ensure organizational performance objectives are being met and appropriate improvement actions are identified and implemented.

The C-A Department has adopted a self-assessment framework primarily based on the Malcolm Baldrige National Quality Award Criteria. Which are as follows:

- Leadership Commitment and Involvement
- Human Resource Development and Management
- Customer Focus and Satisfaction (Customer Value)
- Process Management
- Business and Operational Results
- Compliance with Laws Regulations and Contractual Requirements

1.0 Evaluation of Objectives and Measures

For each of the assessment criteria stated above, C-AD has established objectives, strategies, performance measures and indicators where appropriate. Refer to matrix within this document. A brief summary of C-A performance items, which were not captured in the matrix, is listed below.

1. Occurrence reports and Nonconformance reports

   Reportable occurrences continue to trend downward. Refer to C-A Performance Indicators.

   Seven Nonconformance Reports (NCRs) were issued in FY01. Five were the result of the internal EMS Assessment and two addressed spills. Corrective actions were approved and implemented.

2. EMS

   a. In July of 2001, the Department successfully underwent an independent review of the C-A environmental management program by NSF-ISR. The C-A Department is now within the BNL 14001 Scope of Registration.

   b. To ensure that the review and revision to any one of the C-A EMS documents considers the impact on the other three related documents, i.e., process evaluations, Operational Control Forms, Environmental Management Programs and Environmental Training Packages, an annual review of these documents has been established. The C-A EMS Manager tracks the status of these reviews in the C-A EMS Task List.

   c. C-A OPM 1.4.7, Format and Document Control of Derivative Procedures, has been revised. New revision requires Environmental Management Programs (EMP), Operational Control Form (OCF), Process Evaluations, and Process Specific EMS Training Forms, to be reviewed and approved by the Collider-Accelerator Department Chairman.

   d. C-A OPM 2.28, C-A Procedure for Enhanced Work Planning and C-A-OPM 2.29, C-A Procedure for Enhanced Work Planning for Experimenters, have been revised to include the requirement that environmental concerns and waste minimization opportunities shall be addressed through a review by the C-A Environmental Compliance Representative.

   e. Pollution prevention examples in FY01 include:
      - Ozone water treatment systems to replace chemical treatments
      - Caps installed over activated soil areas
      - HEPA filters in the new BAF Support Laboratory
      - Tritiated water systems were isolated and water makeup monitors and alarms installed
      - P2 funding request submitted to reduce PCBs at Linac
      - Prepared plans to build a storage building for radioactive materials

   f. Waste reduction examples in FY01 include:
      - Tankers heated to eliminate tritiated water ~ 20,000gal/y
      - 6,800 gallons of waste oil to steam plant
      - 30,000 lb of waste Pb sent to ATG for reuse
      - >10% waste reduction each year

3. Assessments

   The C-A Department conducted the annual Department Self-Assessment, annual EMS Assessment, annual Environmental Management Review, 24 worker and supervisor self-evaluations, 32 QA assessments, 48 Tier 1 inspections, 52 90-Day Area inspections and 144 inspections of satellite-waste stations. Action items resulting from these internal assessments/reviews are tracked to closure in the C-A Family ATS.

The overall conclusions of these audits were: well written program descriptions, excellent operational procedures, well written and descriptive plans and forms, an excellent commitment by staff and users to the laboratory's policies and an excellent system for control of operations. External audits came to similar conclusions. For example, the BNL Independent Oversight (IO) Office stated that C-A has a "Comprehensive Self-Assessment Program covering all aspects of C-AD research/operations/business and ESH&Q functions".

2.0 FY02 Improvement Planning

The following summarizes the planned improvement activities to be implemented during FY 2002

1. The C-A Training & Procedures Manager will work with the BNL Training & Qualification Office and the AGS/RHIC User Center to improve the process required to enable C-A to improve percent of
    - guests/users linked to job specific training assessments and
    - JTA profiles for guests/users reviewed /updated yearly for additional T&Q needs

2. As indicated by the Recordable Case Rate, injuries were not severe enough to result in significant lost work; however, a low-level awareness program has been instituted in order to help staff reduce the number of injury events in order to meet the Department goal.

3. C-A Family ATS (766.1.1) will track to completion the installation of the AGS H Region Soil Cap.

4. Continue to employ the BNL Quality Program and Services Office to provide assistance in performing scheduled C-A assessments.

3.0 Institutional Improvement Planning

As a result of C-A activities, the following summarizes the planned improvements to be implemented at the BNL institutional level during FY 2002

1. In July 2001, The C-A Training and Procedures Manager noted that the Occupational Medical Clinic (OMC) Job Assessment Form (JAF) listed Oxygen Deficiency Hazard (ODH) as a work environment requiring individuals who enter ODH areas to be put on a specific medical protocol. That is, if an individual's job requirements included entering either Class "0" or Class "1" ODH areas, the individual would be p[laced on the protocol. However, the protocol is only required for entering Class-1 ODH areas. The C-A Training and Procedures Manager worked with OMC to get the JAF clarified to indicate "CLASS-1 ONLY". This would avoid personnel unnecessarily being placed on the protocol.

2. In response to a QA assessment on the hazard communication protocols within C-A, the following improvements have been implemented by the BNL CMS management:

    - CMS Management revised their database to recognize bulk transfers and deletion activities. This improvement expedites data input by stopping duplication of effort for C-A and CMS personal.

    - When requested, CMS will provide personnel to assist C-A with expediting major issues/concerns

3. Based on Off-Normal Occurrence CH-BH-BNL-AGS-2000-0005 (occurred in FY01), the following institutional improvement has been identified:

    - The BNL Lesson Learned Coordinator shall issue information on this occurrence to similar BNL organizations that have dispersed beam line components connected via energized cables where work was performed prior to the adoption of Integrated Safety Management, e.g. the NSLS. The Lesson Learned Coordinator shall request that they inspect similar areas for unconnected wires that may not have been properly terminated and labeled.

ASSESSMENT CRITERIA 1: Leadership Commitment and Involvement

OBJECTIVE:
Excellence in environmental responsibility and safety in all Department operations.

APPROACH:
ES&H

a) Conduct an EMS management review in accordance with the "Environmental Assessments" Subject Area to ensure the continuing suitability, adequacy and effectiveness of the EMS.
b) Senior managers shall participate in facility ESHQ Walk throughs.

Measures	Indicators	Responsibility	Schedule/Due Date
Management Review Completed in accordance with the "Environmental Assessments" Subject Area. Management review completed and "Record of Decision" issued		EMS Representative	Annual August 2001

Results:
C-A Department Environmental Management System (EMS) Management Review was convened on August 7, 2001. Environmental Management Review Record of Decision issued on August 17, 2001. Action items are being tracked to closure in the C-A Family ATS (904).

Action Items:
None

Senior Management ESHQ Walk throughs.	Number of Senior management walkthroughs performed per year	C-A Department Chairman	Annual September 2001

Results:
As reported in the FY 2000 Self-Assessment report, the C-A Department Chair continues to foster a culture which encourages senior management to be involved in the various operations and experimental activities within C-A, e.g. Experimental Safety Review Committee (ESRC) and the Accelerator Safety System Review Committee (ASSRC). While the exact number is not available, Department Chairman had performed 12 walkthroughs by March of 2001.

Action Items:
None

ASSESSMENT CRITERIA 2: Human Resource Development and Management

OBJECTIVE:

1 Create a pool of talented, empowered, motivated, and goal oriented leaders/managers/workers to support and enhance the C-A competitive position within the DOE laboratory complex.

2 Provide a high quality work environment that enhances C-A's ability to retain and attract an excellent workforce.

APPROACH:

1 Planning for staff development is accomplished via the C-A long-range staffing plan.

2 Training is promoted via the C-A Training Plan as described in OPM 1.12, Conduct of Training Policy (Training Plan).

3 The overall training strategy is found in two documents:

a) Training Plan Agreement (http://www.rhichome.bnl.gov/AGS/Accel/SND/Training/trainplan.pdf)

b) Training Plan (http://www.rhichome.bnl.gov/AGS/Accel/SND/OPM/Ch01/01-12.PDF)

4. Environmental training, which is process specific, may be found at: Training-Process Specific (http://www.esh.bnl.gov/esd/Internal/ags/C-A.htm)

5. C-A promotes education of its staff through the laboratory reimbursement program for continued college-level education. In addition, C-A encourages and supports its staff to attend technical industrial courses as well as various accelerator and high energy and nuclear physics conferences.

6. Via C-A OPM 9.4.2, Self Evaluations, a self-critical attitude is fostered throughout the department from workers to senior management, this provides the basis for correcting weaknesses as well as promoting best practices. A self-assessment database for action required/completed is maintained by the C-A ES&H/Q Division.

7. Maintaining quality of work life (employee satisfaction and well being) is done by:

   a. training and educating employees, empowering employees, for example with stop work authority (C-A-OPM 2.28.d, C-A Work Screening Guide),
   b. compensating and recognizing employees for their work via the annual performance appraisal system and the BNL Employee Awards Program,
   c. offering flexibility in work organization and work scheduling on either a case by case basis or for an entire work group,
   d. recruiting and selecting motivated employees,

8. Perform periodic assessments to determine adequacy and effectiveness of listed strategies to achieve objective.

Measures	Indicators	Responsibility	Schedule/Due Date
Strengthen performance appraisal and goal planning process. Establish goals for C-A exempt employees and level 2 and 3 managers.	% of exempt employees and Level 2 and 3 managers with established goals.	Associate Chair for Operations	Annual June 2001
Results: 100 % of the C-A level 2 and 3 managers have documented goals. 100 % of the C-A exempt employees have documented goal. Action Items: None			
Assess implementation of C-A OPM 9.4.2, Self-Evaluations.		Associate Chair for ESHQ	Annual September 2001

Results:
Assessment performed in March of 2001, C-A Self-Evaluation Program 2001-92. While the results of the assessment were found to be acceptable, two minor nonconformances were identified and tracked to closure in the C-A Family ATS (581). These self-evaluations are an element in C-A Department's ongoing effort to improve performance continuously. The reports are evidence of a self-critical attitude throughout the Department from workers to senior management. Observations and requests provided a basis for correcting weaknesses as well as promoting best practices. This program should continue in its present form.

Action Items:
None

ASSESSMENT CRITERIA 3: Customer Focus and Satisfaction (Customer Value)

OBJECTIVE: Operate the C-A facility in a manner that is responsive to C-A internal and external customer expectations.

APPROACH:

1. Understanding of customer and market needs is accomplished via discussions, formal proposals and formal agreements between experimenters (users) and C-A staff.
2. Stakeholders inquiries related to the operation of the C-A are recorded in the BNL Correspondence and Commitment Tracking System maintained by the Collider-Accelerator Department
3. Support BNL's initiative to regarding the BNL Communication and Trust critical outcome.
4. Customer and stakeholder expectations are identified in Memoranda of Agreement/Understanding between C-A Operations and the facility users. Integrating user and performance expectations into the C-A management systems is accomplished by setting operational goals, which are addressed in chapter two of the C-A OPM.
5. The AGS/RHIC Users Committee is a committee that represents the user community in various matters, such as programmatic satisfaction and dissatisfaction, quality of life matters, etc. They communicate both verbally and in writing to the directorate as well as line managers.
6. C-A appoints a liaison-physicist and engineer to each experiment. These individuals communicate with the Experimental Spokesperson, who is chosen from among the users. During construction of experiments, users meet with liaison engineers on a weekly (sometimes daily) basis, to layout experimental apparatus. This interaction allows users to have input at the design stage and leads to optimum layout for efficient running of experimental apparatus.
7. During operations, the weekly Time Meetings allow experimenters to discuss status, identify scheduling priorities, identify user requirements for the upcoming week, voice complaints and at the same time, provide easy immediate access to all the C-A resources and staff.
8. The C-A ESHQ Division maintains an open door policy on training, quality, and ESH issues.
9. Perform periodic assessments to determine adequacy and effectiveness of listed strategies to achieve objective.

Measures	Indicators	Responsibility	Schedule/Due Date
Evaluate effectiveness of weekly Time Meetings.		Department Chairman	Annual September 2001
Results: The Time Meetings continue to be, for at least 30+ years, an effective way for all the involved parties to listen and talk to each other. This is not the only venue for the exchange of information etc., but is the most diverse of the lot. Action Items: None			
Maintain C-A representation in the BNL Envoy program. Determine if current number of C-A employees participating in the Envoy Program is sufficient.	.	Department Chairman	Annual September 2001 (Based on results of assessment, frequency is 3 years)

Results:
The current number of C-A employees (three) participating in the Envoy Program is adequate. The Envoy Program is a relatively small part of the C-A involvement with the public. C-A also has seven employees in the Speakers Bureau, six in the Educational Program, one in the Longwood Mentoring Program, and a very large involvement by staff in the Tour Program.

Action Items:
None

ASSESSMENT CRITERIA 4: Process Management

OBJECTIVE:
Establish, maintain and improve C-A processes/procedures for implementing Laboratory and organizational expectations.

APPROACH:

1 Implement the requirements of ESH Standard 1.3.5. C-A OPM 9.2.1, Procedure For Reviewing Environmental, Health and Safety Aspects Of An Experiment ensures C-A complies with BNL requirements for the planning and control of experiments as defined in ESH Standard 1.3.5

2 Implement work planning and controls requirements per ESH Standard 1.3.6. C-A OPM 2.28, C-A Procedure For Enhanced Work Planning (which includes Stop Work policy) ensures C-A complies with BNL requirements for work planning and control systems as defined in ESH Standard 1.3.6. Assessment of the implementation of the C-A work planning process is performed as part of the C-A Tier I Inspections. All EWP systems within C-A shall be reviewed at a frequency specified by the C-A Work Control Manager.

3 Implementation of the BNL ES&H programs, including the EMS, and Conduct of Operations is verified via scheduled inspections, audits and C-A management, independent and self-assessments. These programs are documented in OPM Chapter 9 procedures (e.g. Tier I and Self-Evaluations), QAP-1001, Independent Assessments and applicable subject areas. Reports are documented and include a description of the findings, corrective action(s), and identification of responsible individual(s).

4 Periodically assess C-A performance for implementation of Laboratory SBMS and internal process. The scope and frequency of assessment areas is based on

- Importance, status, risk, and complexity of the activity, item or process;
- Problems encountered with the activity, or item;
- Scheduling of specific activities;
- Availability of qualified personnel;
- A review of findings reported in previous assessments.

This objective supports those assessments performed in compliance objective.

Measures	Indicators	Responsibility	Schedule/Due Date
Assess implementation of C-A OPM 9.1.16 Lock Out Tag Out for Radiation Safety (RS LOTO)		Q Group	Annual April 2001
Results: Assessment performed in May of 2001, C-A Radiation Safety Committee Procedures, 2001-94. While the results of the assessment were found to be acceptable, three minor nonconformances were identified and tracked to closure in the C-A Family ATS (587). Action Items: None			
Assess implementation of C-A OPM 9.4.1, Safety Inspections		Q Group	Annual July 2001

Results: Assessment performed in November of 1999, Safety Inspection –Tier I, 1999-060. While the results of the assessment were found to be acceptable, one minor nonconformances was identified. Required action performed, procedure, OPM 9.4.1, Procedure for Conducting Safety Inspections, revised March of 2001. next scheduled QA assessment is in the fourth quarter of 2002. As of August 2001, the DOE C-A Facility Representative is in the process of performing a "Surveillance" of the C-A Tier I process. Therefore, a C-A review will not be performed on the Tier I process in FY 2001. Quarterly, the C-A ESHQ Division Head reviews all open safety inspection items to set priorities on open corrective actions and to verify the corrective action are timely. Action Items: None			
Assess implementation of C-A OPM 9.2.1, Procedure For Reviewing Environmental, Health and Safety Aspects Of An Experiment		Q Group	Annual August 2001
Results: Assessment performed in June of 2001, C-A Experimental safety Review Procedures, 2001-99. The results of the assessment were found to be acceptable. At the time of the assessment, the Experimental Safety Review OPM's were under review and instructions were being enhanced to reflect current activities. Action Items: None			
Assess implementation of C-A OPM 2.28, C-A Procedure For Enhanced Work Planning.		Q Group	Annual June 2001
Results: Assessment performed in May of 2001, C-A Enhanced Work Planning Implementation, 2001-96. While the results of the assessment were found to be acceptable, four minor nonconformances were identified and tracked to closure in the C-A Family ATS (588). Action Items: None			
Perform an assessment of the Environmental Management System performed in accordance with the "Environmental Assessments" Subject Area and C-A QAP 1001, Independent Assessments. Very implementation of corrective actions for the three nonconformances from the NSF ISO 14001 Registration assessment performed in August of 2000.		EMS Representative	Annual March 2001

Results:
Assessment performed in May of 2001, Assessment of the ISO 14001 EMS Implementation Collider–Accelerator Department, 2001-95. Nine noteworthy practices were identified within C-A. However, while the results of the assessment were found to be acceptable, five minor nonconformances were identified and tracked to closure in the C-A Family ATS (550).

Action Items:
None

Space Consolidation Building 911 (1999 data as provided in FY 2001 Critical Outcomes, Objectives and Performance Measures) Design Occupancy: 216 Actual Occupancy 10/1/99: 185 % Occupancy 10/1/99: 86 Goal for 2001 is a >7% increase in occupancy from 1999 data		Department Chairman	Annual September 2001

Results:
Metric is the percentage change in office occupancy, over two years, for BNL's large permanent facilities, where the OCC= OCC_{00} - OCC_{99}, and the

$$OCC_{xx} = \frac{\text{actual number of office occupants x 100}}{\text{design office occupancy}}$$

$$OCC_{99} = \frac{185 \times 100}{216} = 86\%$$

$$OCC_{01} = \frac{246 \times 100}{216} = 114\%$$

therefore the OCC for FY01 is
= 114% - 86%
= 28% (> 7.0% is outstanding)

Action Items:
None.

ASSESSMENT CRITERIA 5: Business and Operational Results

OBJECTIVE:

1 Design and construct new accelerator facilities in support of the BNL and national missions.

2 Operational

a) Operate and improve the suite of proton/heavy ion accelerators and beam transports used to carry out the program of accelerator-based experiments at BNL thus supporting the research mission of the laboratory's user population.

b) Support the experimental program including design, construction, and operation of the beam transports to the experiments plus partial support of detector and research needs of the experiments

APPROACH:

1 Report construction and operational progress/status to senior management at a frequency established by department/project management.

2 Operational:

a) The C-A mission is defined in Field Work Proposals (FWP), Conceptual Design Reports and Project Management Plans.

b) Changes and upgrades to the accelerators are described in the Accelerator Improvement Projects.

c) ES&H improvements are captured in Safety and Health Activity Data Sheets and in the EPA Phase II Process Evaluations.

Measures	Indicators	Responsibility	Schedule/Due Date
Basic Science & Technology: Success in Constructing and Operating Research Facilities 1. C-A Operations per FY01 Schedule (http://server.c-ad.bnl.gov/esfd/CAD_operation_fy01.pdf) and accelerator performance meets the operational goals as specified in the FY 2001 Field Work Proposal, e.g. eight fixed target experiments planned for AGS, RHIC physics run to include the first RHIC Spin physics run colliding polarized proton beams at a center-of-mass energy of up to 500 GeV and with a luminosity of up to 2 x 10^{32} cm^{-2} s^{-1}. 2. Meet critical milestones of the Spallation Neutron Source (SNS) as defined in SNS Project Plan.		a. Department Chairman b. SNS Site Team Leader	Per plans

Results:

The AGS/RHIC facility is meeting its operational goals. RHIC reached its design energy of 100GeV per gold nucleon. The full complement of beam bunches, 56, were collided at 100GeV. Even more importantly, the physics run began. During the polarized proton run the AGS complex achieved up to 40% polarization and design bunch intensities. The RHIC pp physics run lasted 5 weeks and reached the luminosity goal of 1-1.5*10^30 cm^2 s^-1 with polarization levels up to 25%.

BNL is meeting our SNS milestones in accordance with the SNS project management plan

Action Items:

None

ASSESSMENT CRITERIA 6: Compliance with Laws Regulations and Contractual Requirements

OBJECTIVE:
Maintain compliance with applicable BNL regulations and contractual expectations.

APPROACH

1 Compliance requirements are communicated to C-A staff through participation on Laboratory committees, Laboratory Work Groups and through the SBMS. Senior C-A staff participate on the Laboratory Electrical Planning Committee, Laboratory Environmental, Health and Safety Committee, Radiation Protection Working Group, Environmental Management System Implementation Group, and Laboratory Electrical Safety Committee, all of which meet regularly.

2 In accordance with the BNL EMS, a regulatory compliance assessment, environmental management review, and EMS assessment shall be performed annually.
- Ensuring compliance to applicable requirements is addressed via scheduled inspections, audits and C-A management, independent and self-assessments. These programs are documented in the C-A OPM, C-A Quality Assurance Manual, Independent Assessments and applicable subject areas. Reports are documented and include a description of the findings, corrective action(s), and identification of responsible individual(s). A general index of C-A ESHQ programs can be found at http://server.rhichome.bnl.gov/SND/indexoftopics.htm .

3 Perform periodic assessments to determine adequacy and effectiveness of listed strategies to achieve objective.

Measures	Indicators	Responsibility	Schedule/Due Date
Verify C-A Environmental Compliance Representative (ECR) performs annual reviews of C-A's compliance with regulatory requirements.		Associate Chair for ESHQ	Annual March 2001
Results: ECR compliance reviews were addressed via the Tier I process Action Items: None			
Training and Qualification (T&Q) Performance Permanent Employees 1. % of C-A staff linked to job specific training assessments. (outstanding rating is ≥95%) 2. % of requirement JTA profiles for C-A staff reviewed /updated yearly for additional T&Q needs (outstanding rating is ≥95%) 3. % of T&Q requirements completed by C-A staff (outstanding rating is ≥95%) Transient Staff 1. % of guests linked to job specific training assessments. (outstanding rating is ≥80%) 2. % of requirement JTA profiles for guests reviewed /updated yearly for additional T&Q needs (outstanding rating is ≥80%) 3. % of T&Q requirements completed by guests (outstanding rating is ≥80%)	% of required training completed.	Training & Procedures Manager	Semiannual June 2001

Results:

Permanent Employees

1. C-A has met the 95% outstanding rating for permanent C-A employees linked to job specific training assessments
2. The C-A Dept Training Manager has reviewed, and updated as necessary, approximately 95% of the training requirements (JTA profiles) for C-A's permanent employees. This is also ongoing since personnel come and go (new hires and terminations), and since job tasks for existing personnel change and thus their training requirements may change.
3. C-A has met the 95% outstanding rating for permanent C-A employees % of T&Q requirements completed by C-A staff

Transient Individuals (guest/user)

1. % of guests/users linked to job specific training assessments and % of requirement JTA profiles for guests/users reviewed /updated yearly for additional T&Q needs

   Currently, no system is in place at BNL that keeps track of whether or not a transient person (i.e.: guest/user) is physically here at the Lab. The resources do not exist at the C-A ESHQ Division level to continually track down guests/users to determine where they are. As the term indicates, "transient" people come and go. Without a system established at BNL, that continually tracks guests/users and which updates their training record status from ACTIVE to INACTIVE and from INACTIVE to ACTIVE as they come and go, it is not possible for C-A ESHQ to verify the 80% goal. Without such a system, C-A would be counting incomplete training requirements for people who are not at the lab to complete the training, and are not even required to complete the training since they are not here doing work. This has been discussed with the BNL Training & Qualification Office and the BNL AGS/RHIC Users Center.

   Per the C-A Training & Procedures Manager, a system is now in place to properly link incoming guests/users to the correct JTAs (Job Training Assessments) as they check in to BNL at the RHIC/AGS Users' Center or at the C-A Training Office. Incoming guests informed of what training is required based on their tasks at the C-A complex, and their records are updated accordingly.

2. % of T&Q requirements completed by guests/users
   The Collider-Accelerator Department (department code "AD") has met the 80% training completion rate for AD guests. The current completion rate, as of Sept 24, 2001, is 84%. Reports of current training completion rates are available on the Brookhaven Training Management System (BTMS) at http://training.bnl.gov/.

Action Items:

The C-A Training & Procedures Manager will work with the BNL Training & Qualification Office and the AGS/RHIC User Center to improve the process required to enable C-A to improve percent of

- guests/users linked to job specific training assessments and
- requirement JTA profiles for guests/users reviewed /updated yearly for additional T&Q needs

Radiological Control Excellence: C-A Collective Dose Goal for FY 01 is 24.0 person-rem. This assumes 2.5 months of equivalent HEP (high intensity protons to C and D lines), four months of g-2 running, six (6) program months of RHIC and NASA, 0.5 months of PtR, and four (4) months of maintenance.		Associate Chair for ESHQ	Quarterly (Performance Indicator)

Results:
The C-A Collective Dose for FY01 of 17.7 person-rem was well within the C-A ALARA dose goal for FY 01 of 24.0 person-rem. A review by the ALARA Committee indicated that the Collective Dose Goal for FY01 was in line with prior years when compared to actual dose, and that the goal continued to help drive dose reduction.

Action Items:
None

Occupational Safety and Health Total Recordable Case Rate (RCR), FY 01 Goal = 2.0 Lost Workday Case Rate (LWCR) FY 01 Goal = 1.0		Associate Chair for ESHQ	Quarterly (Performance Indicator)

Results:
As reported in the C-A Performance Indicator Report, 12/26/01

- The Recordable Case Rate was 2.4 per 100 FTE; this is greater than (worse than) the Department goal of 2.0 per 100 FTEs.
- The Lost Work Case Rate was 0.34 per 100 FTEs; this is less than (better than) the Department goal of 1.0 per 100 FTEs.

Action Items:
As indicated by the Recordable Case Rate, injuries were not severe enough to result in significant lost work; however, a low-level awareness program has been instituted in order to help staff reduce the number of injury events in order to meet the Department goal.

Environmental Excellence Reduce routine wastes and conserve resources consistent with contractual and DOE goals. Goal — Waste Type 186.4 ft^3. — Hazardous Waste 1970 ft^3. — Radioactive Waste 49 ft^3. — Mixed Waste		Associate Chair for ESHQ	Quarterly (Performance Indicator)

Results:
For FY01 the C-A did not exceed its allotments for radioactive, hazardous, mixed and industrial waste. Thus, there were no charge backs to the C-A Department. The C-A Environmental Coordinator is screening transfer of materials to Waste Management Division to ensure recycling is implemented where practicable. C-A will continue to work closely with the Hazardous Waste Management Division to ensure future goals are meet.The following table details the amount of waste sent to the WMD in FY01 without funding from the C-A Department.

Hazardous/Industrial Drummed (lbs)	27895
Hazardous/Industrial Labpacked (lbs)	1313
Mixed (cu ft)	22
Radioactive Liquid (cu ft)	1875
Radioactive Solid (cu ft)	2719

Action Items:
None

Report percent of activated soil locations that have been capped. Revise C-A OPM 1.10.2, Environmental Management Program Description	% of activated soil locations capped.	Associate Chair for ESHQ	Annual August 2001
Results: 100% of activated soil regions are capped. This includes appropriate activated soil regions at the Linac, Booster, AGS, U, V and W lines, the beam lines in Building 912, and the RHIC. The BAF, new Booster beam dump and H region of the AGS Ring are in the process of being capped since future operations may create activated soil in those regions. Action Items: C-A Family ATS item 766.1.1, H Region Cap, will track to completion the installation of the H Region Cap.			
Reduce legacy material within C-A Revise C-A OPM 1.10.2, Environmental Management Program Description	Address two (2) items from C-A Legacy Material List.	Associate Chair for ESHQ	Annual August 2001
Results: Section 2.0 of OPM 1.10.2 was corrected to remove legacy materials from the list of Significant Aspects. Two legacy waste items: 3600 pounds of copper coils (bar code 38386) and a 1200 lbs Wide Band Horn #2 (bar code 38380) were sent to WMD. Action Items: None			
Report percent of scheduled assessments completed.	% of required assessments completed.	QA	Annual August 2001
Results: Thirty (30) assessments were scheduled for FY 2001. One of the scheduled assessments, Siemens' Operations, was rescheduled to 2002 due to required repairs of the MG set. During FY 2001, three (3) assessments were added to the 2001 schedule, Chipmunk Radiation Monitor Controls, Regulatory Compliance for Storage and Transfer of Hazardous Materials, and Regulatory Compliance for Target Cave Air and Cooling Tower #2 Samples. To date, QA has performed 26 of the 29 scheduled assessments and three unscheduled assessments. Percent of FY 2001 assessments completed is 90%. Action Items: Continue to employ the BNL Quality Program and Services Office to provide assistance in performing scheduled C-A assessments.			